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EXAMINER
DOAN, KIET M

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/613,702	CHANDRANMENON ET AL.
Office Action Summary	Examiner	Art Unit	
	KIET DOAN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 January 2008_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-6,8,10-12,14-18,20,22 and 23_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-6,8,10-12,14-18,20,22 and 23_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _07/03/03_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
          application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is response to Remarks file on 01/22/2008.

Claims 7, 9 and 19 are cancelled.

Claims 13, 21, 24-26 are withdrawn

Claims 1, 5, 8, 10, 18, 22, 23 are amended.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-3, 14-16, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Rusch (US 6,801,777 in view of Ji et al. (US 2003/0185233 A1).

Claims 1, 14, and 22 (A computer readable medium code, i.e.,). Rusch teaches

a method of operating a mobile node having a network layer and a plurality of network

interface, each with a respective device driver, the method comprising the steps of:

transmitting communications from the network layer to any of the network

interfaces by way of a multi-interface driver capable of communication with the

respective device driver corresponding to each respective network interface; and

(Abstract, Col.2, lines 42-45, Col.3, lines 43-50, Fig.1, Illustrate communication device

100 as read on mobile node wherein contain plurality radio interface that allow the

transceiver/communication with respective device driver corresponding to each

respective network interface), switching from a first one of the network interfaces to a

second one of the network interface by changing the one of the plurality of device

drivers with which the multi-interface driver communicates (Col.2, Lines 23-34, Col.6,

lines 31-65, Fig.2, Illustrate and teach the mobile node capable of selecting one of

available network interface base on location information, traffic information, i. e., as read

on switching from first network interface to second network interface by changing one of

the plurality interface. Rusch teaches all the claimed limitations as discussed above **but

is silent on** hiding the switching from the network layer.

In an analogous art, Ji teaches "Method, apparatus, and medium for migration

across link technologies". Further, **Ji teaches** hiding the switching from the network

layer (Paragraphs [0080], [0110] shows the mobile communication device capable of

selecting/switching different connectivity technology (MALT) wherein the switching could

be hidden from the network layer).

Therefore, It would have been obvious at the time that the invention was made to

modify Rusch with Ji's system, such that mobile node having plurality of network

interface, each with a respective device driver that transmitting network layer to any of

the network interfaces by way of a multi-interface driver and switching from a first one of

the network interfaces to a second one of the network interface by changing the one of

the plurality of device drivers and hiding the switching from the network layer to provide

means for avoiding disconnected in communication when the users switching the

connection from plurality interface.

Consider **claims 2, 15**. Ji teaches the method of claim 1, further comprising communicating between a virtual interface and the network layer by way of the multi-interface driver, the virtual interface presenting the appearance of always being an active interface to the network layer, regardless of which network interface is being used at a given time (Paragraphs [0013], [0109] teach the MALT of mobile device built in ARP protocol and ARP protocol support by virtual all IP network which can be virtual connection or plugged into any active interface without affecting network operation at given time).

Consider **claims 3, 16**. Ji teaches the method of claim 2, wherein the virtual interface provides a source address to the network layer to be used in data packets transmitted by the mobile node (Paragraph [0010-0011], [0013] teach mobile device contain multi-home as read on source address to the network layer to be used in data packets).

4.   Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rusch (US 6,801,777 in view of Ji et al. (US 2003/0185233 A1) and further view of Michaelis et al. (US 2004/0009751 A1).

Consider **claims 4, 17.** The combination of Rusch and Ji fails to specifically teach selecting the second one of the network interfaces, based on a signal strength of each network interface and a user priority assigned to each network interface.

In an analogous art, Michaelis teaches "Interface selection in a wireless communication network". Further, **Michaelis teaches** the method of claim 1, further

comprising: selecting the second one of the network interfaces, based on a signal strength of each network interface and a user priority assigned to each network interface (Paragraph [0004], [0007], teach technique for selection wireless network interface wherein base on a signal strength and priority).

Therefore, it would have been obvious at the time that the invention was made to modify the combination of Rusch and Ji with Michaelis system, such that selecting the second one of the network interfaces, based on a signal strength of each network interface and a user priority assigned to each network interface to provide means for the mobile device selected the best link/interface to communicate without interruption.

5.   Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rusch (US 6,801,777 in view of Ji et al. (US 2003/0185233 A1) and further view of Stockhusen (US 7,181,237 B2).

Consider **claim 12**. Rusch and Ji teach all the limitations as discussed above with respect to the method of claim 1, but fail to specifically disclose automatically selecting the second network interface based on predefined criteria; displaying an identification of the automatically selected interface; receiving a manual override instruction from a user identifying a selection of the second network by the user; and switching to the network selected by the user.

In an analogous art, Stockhusen teaches "Control of a multi-mode, multi-band mobile telephone via a signal hardware and software man machine interface".

Stockhusen teaches

automatically selecting the second network interface based on predefined criteria

(Col.8, lines 56-67, Col.9, lines 1-6 teach the automatic selection); displaying an

identification of the automatically selected interface; receiving a manual override

instruction from a user identifying a selection of the second network by the user; and

switching to the network selected by the user (Col.2, lines 60-67, Col.3, lines 1-14 teach

the mobile phone contain plurality mode allow the users to switching and selecting the

network wherein the mobile phone having display for displaying an identification of the

automatically selected interface).

Therefore, it would have been obvious at the time that the invention was made to

modify Rusch, Ji with Stockhusen's system, such that automatically selecting and

displaying the selecting that the user identifying a selection to provide means for the

users of mobile device capable of operated in a fast mode for and accurate selecting

the network interface.

6.   Claims 5, 6, 8, 18, 20, 23 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rusch (US 6,801,777) in view of Michaelis et al. (US 2004/0009751

A1).

Consider **claim 5, 18 and 23** (A computer readable medium code, i.e.,). Rusch

teaches a method of operating a mobile node, comprising the steps of:

identifying at least two available interfaces for communications by the mobile

node (Col.2, lines 41-44, Fig.1, Illustrate wireless device 100 contain at least two

available interfaces for communications);

determining a plurality of characteristics of each of the network interface, <u>wherein the characteristics for each network interface including signal strength value and user priority value (</u>Col. 2, lines 16-25, lines 45-67, Fig.1 illustrate and teach the plurality of characteristics of each of the network interface)

selecting one of the network interfaces based on the characteristics <u>of the respective network interface, wherein a weight applied to the user priority value for each network interface depends on the respective signal strength for the network interface</u>; and communicating by way of the selected network interface (Col. 2. lines 30-35, Col.6, lines 30-45 teach the selection network interface). Rusch teaches the limitations of claim 5, 18 and 23 as discussed above **but is silent on** <u>the characteristics for each network interface including signal strength value and user priority value, wherein a weight applied to the user priority value.</u>

Michaelis teaches <u>the characteristics for each network interface including signal strength value and user priority value, wherein a weight applied to the user priority value.</u> (Abstract, Paragraph [0004], [0007], teaches technique for selection wireless network interface wherein base on a signal strength and priority).

Therefore, it would have been obvious at the time that the invention was made to modify Rusch with Michaelis's system, such that identifying at least two available interfaces for communications by the mobile node, selecting one of the network interfaces based on the characteristics wherein the characteristics including signal strength value and user priority value to provide means for mobile device capable of in a fast mode and accurate for selecting the network interface.

Consider **claim 6**. Rusch teaches a method according to claim 5, wherein the mobile node is communicating by way of a current network interface connection other than the selected network interface, the method further comprising:

establishing a connection between the mobile node and the selected network interface (Col.2, lines 27-35; and

maintaining the current network interface connection until after the connection between the mobile node and the selected network interface is established (Col.4, lines 23-35 teach the mobile device contain radio controller that establishing a connection and maintain the current network interface connection also have a backup link in case link dropped).

Consider **claim 8**. Rusch teaches the method of claim 5, wherein: the mobile node is currently communicating by way of a current network interface connection, and the score is calculated by applying a higher weight coefficient to the signal strength of the current network interface connection than a weight coefficient applied to the signal strength of any other available network interface (Col.4, Lines 35-54 teach the communication device 100 can calculated the signal transmitted from one or more communications network to determine location which inherently apply weight coefficient to the signal strength of any other available network interface).

Consider **claim 20**. Rusch teaches the mobile node of claim 18, wherein the selecting means includes hysteresis (Col. 2, lines 40-65 the communication device 100 have plurality of interfaces for the users to select/change between networks and allow

the mobile devices to change networks which read on selecting means including

hysteresis).

7.   **Claims 10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Rusch (US 6,801,777) in view of Ayyagari et al. (US 2002/0176366)

Consider **claim 10**. Rusch and Michaelis teach the limitations of claim 10 as

discussed above with respect to the method of claim 5. Rusch **fails to disclose** wherein

a weight coefficient of zero is applied to the user priority value for each network

interface having a signal strength below a respective threshold value for that network

interface.

In an analogous art, Ayyagari teaches "System and method for achieving zero-

configuration wireless computing and computing device incorporating same". Further,

Ayyagari teaches the method of claim 9, wherein a weight coefficient of zero is applied

to the user priority value for each network interface having a signal strength below a

respective threshold value for that network interface (Abstract, Paragraph [0014], [0061-

0062]).

Therefore, It would have been obvious at the time that the invention was made to

modify Rusch and Michaelis with Ayyagari system, such that weight coefficient of zero

is applied to the user priority value for each network interface having a signal strength

below a respective threshold value for that network interface to provide means for

priority for the users able to access network with low signal strength.

Consider **claim 11**. The combination of Rush, Michaelis and Ayyagari teaches

the method of claim 10. In addition, Ayyagari discloses where the mobile node is

currently communicating by way of a current network interface connection, and the threshold value for the current network interface connection is lower than the threshold value for other network interfaces (Paragraph [0061]).

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET DOAN whose telephone number is (571)272-7863. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Appiah N. Charles can be reached on 571-272-7904. The fax phone
number for the organization where this application or proceeding is assigned is 571-
273-8300.

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/Kiet Doan/
Examiner, Art Unit 2617

/Charles N. Appiah/

Supervisory Patent Examiner, Art Unit 2617